

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in this application.

Listing of Claims:

1. (Currently Amended) A method of disseminating information to a plurality of nodes, the nodes connected in a network environment, said method comprising:

receiving, at a first node, a disseminated message, the message having broadcast-type information;

for the first node, creating a partial view, wherein the partial view is specific to the first node and resides locally to the first node, and wherein the partial view identifies any two or more but less than all nodes on the network such that a second node is connected directly to the first node and a third node is connected indirectly to the first node and the nodes are connected and distributed across the network, and such that the partial view comprises address information for at least one of the nodes in the partial view, wherein the number of nodes identified in the partial view is determined in order to provide a determined probability of the message being sent to all nodes;

evaluating the received message;

determining if the received message has been previously received by the first node;

[[and]]

if the received message has not been previously received, delivering the message to only nodes identified in the partial view of the first node; and

storing identification information for the received message in a storage device.

2. (Previously Presented) A method as defined in claim 1 wherein the act of delivering the message further comprises delivering the message to a subset of all nodes identified in the partial view.

3. (Original) A method as defined in claim 1 wherein each node in the network maintains a partial view.

4. (Cancelled)

5. (Previously Presented) A method as defined in claim 1 further comprising:
if the message has been previously received, then not delivering the message to any other node identified in the partial view.

6. (Previously Presented) A method as defined in claim 1 further comprising the act of storing identification information related to the received message to enable the determination of whether the message has been previously received.

7. (Previously Presented) A method as defined in claim 1 further comprising:
determining whether the message is a broadcast-type message; and
if the message is not a broadcast-type message, then not delivering the message to any other node identified in the partial view.

8 – 19. (Canceled)

20. (Currently Amended) A computer system for disseminating information between nodes in a distributed network of nodes comprising:

at least one processor; and

memory coupled with and readable by the processor and comprising a series of instructions that, when executed by the processor, cause the processor, for each node, to:

receive at a first node a broadcast message;

store information related to other nodes in a partial view of the first node, wherein the partial view is specific to the first each node and identifies any two or more but less than all nodes on the network such that a second node is connected directly to the first node and a third node is connected indirectly to the first node and the nodes are ~~connected and~~ distributed across the network, and such that the partial view comprises address information for at least one of the nodes in the partial view, and wherein the number of nodes identified in the partial view is determined in order to provide a determined probability of the message being sent to all nodes;
determine if the received message has been previously received by ~~[[a]]~~ the first node;

and

transmit broadcast information to only nodes indicated in the partial view if the received message has not been previously received by the first node.

21. (Cancelled)

22. (Previously Presented) A computer system as defined in claim 20 wherein the broadcast information is transmitted to a subset of all nodes identified in the partial view.

23. (Previously presented) A computer system as defined in claim 20 wherein the computer system is part of a distributed network of computer systems, and wherein other computer systems in the network maintain a partial view of the network.

24. (Currently Amended) A distributed network of nodes having the ability to communicate information between said nodes, said network comprising:

an application-based broadcast protocol using a gossip-based algorithm;

each node maintaining a partial view of the entire network, such that the partial view of a first node identifies any two or more but less than all nodes on the network such that a second node is connected directly to the first node and a third node is connected indirectly to the first node and the nodes are ~~connected and~~ distributed across the network, and such that the partial view comprises address information for at least one of the nodes in the partial view, wherein the number of nodes identified in the partial view is determined in order to provide a determined probability of a message being sent to all nodes; and

each node gossips only to nodes identified in each node's partial view.

25. (Currently Amended) A computer readable storage medium having stored thereon a data structure comprising:

a first identification field for storing address location information for a node in a network environment;

a second identification field for storing address location information for another node in a network environment;

wherein the first and second identification fields represent a partial view of the network environment, wherein the partial view of a first node identifies any two or more but less than all nodes on the network such that a second node is connected directly to the first node and a third node is connected indirectly to the first node and the nodes are ~~connected and~~ distributed

across the network, and such that the partial view comprises address location information for at least one of the nodes in the partial view, wherein the number of nodes identified in the partial view is determined in order to provide a determined probability of a message being sent to all nodes; [[and]]

wherein the data structure is used for a gossip-based communication between the nodes in the network; and

wherein a message received at the first node is delivered to only nodes identified in the partial view of the first node if the received message has not been previously received by the first node.

26. (Cancelled)

27-29 (Canceled).

30. (Withdrawn) A method as defined in claim 1 further comprising dynamically updating one or more partial views, wherein the act of updating the partial view comprises:

- receiving a request to subscribe to the network from a new node;
- determining whether to keep new node information related to the new node; and
- if the new node information is to be kept, storing identifying information related to the new node; and

forwarding the subscription request message to at least one other node in the network.

31. (Withdrawn) A method as described in claim 30 wherein the determining act further comprises:

- predetermining a threshold value;
- upon receipt of the request to subscribe, generating a random number;
- comparing the random number to the predetermined threshold value; and
- based on the results of the comparison determining whether to keep the information related to the new node.

32. (Withdrawn) A method as defined in claim 31 wherein the threshold value relates to whether the new node randomly chose the given node as the receiving node.

33. (Withdrawn) A method as defined in claim 30 wherein the subscription request is received by the given node having the partial view of the network and wherein the subscription request is forwarded to all nodes identified in the partial view of the given node.

34. (Withdrawn) A method as defined in claim 30 wherein the subscription request is received by the given node having a partial view of the network and wherein the subscription request is forwarded to only one node identified in the partial view of the given node.

35. (Withdrawn) A method as defined in claim 33 further comprising:
receiving a forwarding subscription request;
determining whether to keep the new subscription request based on predetermined criterion; and
keeping the new node information if the predetermined criterion is satisfied.

36. (Withdrawn) A method as defined in claim 30 further comprising:
determining whether the new subscription request is new or forwarded; and
if forwarded, determine whether to keep the new node information based on a predetermined criteria wherein the predetermined criteria relates to a random selection.

37. (Withdrawn) A method as defined in claim 36 wherein the predetermined criterion relates to a probability inversely proportional to the size of the partial view for the given node.

38. (Withdrawn) A method as defined in claim 37 wherein the predetermined criterion further relates to the distance between the new node and the given node.

39. (Withdrawn) A method as defined in claim 37 wherein the act of determining whether to keep the new node information first determines whether the new node information

resides in the partial view of the given node and if so, forwards the subscription request to another node identified in the partial view of the given node.

40. (Previously Presented) A method as defined in claim 1 wherein the partial view has a defined size, and wherein the size of the partial view is determined by one from the group consisting of $\log(n)$ and $\log(n)$ multiplied by a predetermined value, wherein n relates to the number of nodes in the network and \log refers to the natural logarithm.

41. (Previously Presented) A computer system as defined in claim 20 wherein the partial view has a defined size, and wherein the size of the partial view is determined by one from the group consisting of $\log(n)$ and $\log(n)$ multiplied by a predetermined value, wherein n relates to the number of nodes in the network and \log refers to the natural logarithm.

42. (Previously Presented) A distributed network of nodes as defined in claim 24 wherein the partial view has a defined size, and wherein the size of the partial view is determined by one from the group consisting of $\log(n)$ and $\log(n)$ multiplied by a predetermined value, wherein n relates to the number of nodes in the network and \log refers to the natural logarithm.

43. (Previously Presented) A distributed network of nodes as defined in claim 24 wherein the partial view comprises status information for at least one of the nodes in the partial view.

44. (Previously Presented) A distributed network of nodes as defined in claim 24 wherein the partial view comprises lifetime value information for at least one of the nodes in the partial view.

45. (Previously Presented) A distributed network of nodes as defined in claim 24 wherein the act of gossiping further comprises:

receiving a broadcast-type message; and
delivering the received message to a subset of all nodes identified in the partial view.

46. (Currently Amended) A computer readable storage medium as defined in claim 25 wherein the partial view has a defined size, and wherein the size of the partial view is determined by one from the group consisting of $\log(n)$ and $\log(n)$ multiplied by a predetermined value, wherein n relates to the number of nodes in the network and \log refers to the natural logarithm.

47. (Currently Amended) A computer readable storage medium as defined in claim 25 wherein the partial view comprises status information for at least one of the nodes in the partial view.

48. (Currently Amended) A computer readable storage medium as defined in claim 25 wherein the partial view comprises lifetime value information for at least one of the nodes in the partial view.

49. (Currently Amended) A computer readable storage medium as defined in claim 25 wherein the gossip-based communication comprises:
receiving a broadcast-type message; and
delivering the received message to a subset of all nodes identified in the partial view.